

**CLAIMS**

1. A method for determining at least one current coordinate of a movable sensor comprising:
  - 5 positioning a marker detector in a predetermined relationship with the sensor;
  - detecting a marker with the marker detector;
  - receiving positional information associated with the marker; and
  - determining a position of the sensor based on the received positional information associated with the marker and the predetermined relationship between the marker detector and the sensor.
2. The method of claim 1 wherein the marker is a bar code and the marker detector is an optical scanner.
- 15 3. The method of claim 2 wherein the sensor is a receiving antenna for a GPR signal.
4. The method of claim 1 further including the step of deploying a plurality of markers, and encoding each marker with its associated positional information.
- 20 5. An apparatus for determining at least one current coordinate of a movable sensor, said apparatus intended to be used with a plurality of markers associated with positional information and comprising:
  - a marker detector that transmits a marker detection signal when in close proximity to a marker; and
  - 25 a control unit coupled to the marker detector and to the sensor;  
wherein the positional information associated with a marker is provided to the control unit in response to the marker detection signal and the control unit determines at least one coordinate of the sensor based on said positional information and on a predetermined location of the marker detector relative to the sensor.
- 30 6. The apparatus as claimed in claim 5, further comprising a movable platform upon which the marker detector and the sensor are located.

7. The apparatus as claimed in claim 5, wherein a marker includes a bar code and the marker detector is a bar code scanner.

5 8. A system comprising:

A. apparatus for determining at least one current coordinate of a movable sensor, said apparatus intended to be used with a plurality of markers associated with positional information and having

10 1. a marker detector that transmits a marker detection signal when in close proximity to a marker,

2. a control unit coupled to the marker detector and to the sensor, and

3. a movable platform upon which the marker detector and the sensor are located;

15 B. wherein the positional information associated with a marker is provided to the control unit in response to the marker detection signal and the control unit determines a coordinate of the sensor based on said positional information and on a predetermined location of the marker detector relative to the sensor;

C. a grid; and

20 D. wherein the plurality of markers are located at predetermined locations on the grid.

9. A system as claimed in claim 8 wherein an additional marker is placed on the grid and can be read by the sensor to provide additional information such as the grid size and/or the arrangement of the plurality of markers on the grid.

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10. A system comprising:

A. apparatus for determining at least one current coordinate of a movable sensor, said apparatus intended to be used with a plurality of markers associated with positional information and having

30 1. a marker detector that transmits a marker detection signal when in close proximity to a marker,

2. a control unit coupled to the marker detector and to the sensor, and

3. a movable platform upon which the marker detector and the sensor are located;
- B. wherein the positional information associated with a marker is provided to the control unit in response to the marker detection signal and the control unit determines at least one coordinate of the sensor based on said positional information and on a predetermined location of the marker detector relative to the sensor;
- C. a ribbon; and
- D. the plurality of markers being located at intervals along said ribbon.

11. A system as claimed in claim 10 wherein an additional marker is placed on the ribbon and can be read by the sensor to provide additional information such as the ribbon length and/or the arrangement of the plurality of markers on the ribbon.